Citation No.: 03-11-15C-004

CALIFORNIA
STATE WATER RESOURCES CONTROL BOARD
DIVISION OF DRINKING WATER

IN RE: **BLUEBELL VALLEY MUTUAL WATER COMPANY**
Water System No.: 5500040

TO: BLUEBELL VALLEY MUTUAL WATER COMPANY
ATTN: TIM HOLDEN
P.O. BOX 56
Standard, CA 95372

Cc: Tuolumne County Environmental Health Department

CITATION FOR
VIOLATION OF HEALTH AND SAFETY CODE, SECTION 116650(a) AND THE PRIMARY DRINKING WATER STANDARD FOR SIGNIFICANT RISE IN BACTERIAL COUNT, TITLE 22, SECTION 64426

February 2015

Issued on April 14, 2015

The State Water Resources Control Board (hereinafter "Board"), acting by and through its Division of Drinking Water (hereinafter "Division") and the Deputy Director for the Division (hereinafter "Deputy Director"), hereby issues this citation (hereinafter "Citation"), pursuant to Section 116650 of the California Health and Safety Code (hereinafter "CHSC") to Bluebell Valley Mutual Water Company (hereinafter "Water System") and its owner of record for

violation of CHSC section 116550(a) and Title 22, California Code of Regulations (hereinafter "CCR"), Section 64426.

APPLICABLE AUTHORITIES

The applicable statutes and regulations are provided in Attachment A, attached hereto and incorporated by reference.

STATEMENT OF FACTS

The Bluebell Valley Water Company (hereinafter "Water System") is a privately-owned community water system located in Tuolumne County that supplies water for domestic purposes to approximately 230 individuals through approximately 90 service connections. The Water System is a community public water system as defined in CHSC, section 116275.

The Water System is required to collect a minimum of one (1) distribution system bacteriological samples per month. The bacteriological water analysis result submitted by the Water System reported the presence of *E.coli* and total coliform bacteria in a routine sample collected by the Water System on February 17, 2015. In addition, a total of six (6) of twelve (12) samples collected in the month of February reported the presence of *E. coli* bacteria. A Tier 1 public notification was issued on February 23, 2015. The following month, March 2015, three sets of routine distribution system samples including the wells were collected and reported results that were absent for total coliform bacteria. The Division rescinded the Boil Water Order on March 27, 2015. A detailed description of the events involving this violation is provided in Attachment B. All water samples for coliform bacteria collected during February and March 2015 are summarized in Attachment C.

Public notification to the Division and consumers of a water system is required whenever there is a significant rise in bacterial count. Notification to the Division is required by the end of the business day on which the violation has been determined. If the Division is closed, notification shall be within 24 hours of the determination. The Laboratory notified the Division on February 23, 2015. The Division was not notified, in accordance with the above referenced section.

Public notification to the customers/consumers of the Water System was conducted on February 23, 2015, advising each customer of the significant rise in bacterial count during the month of February 2015. A copy of the notice that was directly delivered to each customer is provided as Attachment D. Proof of notification is required.

The source of the contamination may have been Well 1B which tested positive for total coliform and *E. coli* bacteria in a repeat sample collected on February 23, 2015. The Water System submitted an incident report (see Attachment E) and the investigation suggests that there is a leach field nearby that is not meeting the minimum setback requirements.

The California Groundwater Rule (GWR) requires the collection of a sample for bacteriological evaluation from the well(s) serving the system in response to a coliform positive distribution sample within 24 hours of being notified of the coliform positive result. Based on data submitted to the Division, the Water System did not collect their raw water well samples from Wells 1A, 1B, 2 and 3 in a timely manner in follow up to the *E.Coli* and total coliform positive routine samples collected on February 17, 2015. Bacteriological sampling of these wells was conducted on February 23, 2015. Wells 1A, 2 and 3 did not shown presence of total coliform bacteria. Well 1B showed the presence of *E. coli* and total coliform bacteria.

DETERMINATION

Based on the above Statement of Facts, the Division has determined that the Water System and its owner of record have has violated CHSC, Section 116550 and Section 64426 in that the water produced by the Water System failed to comply with Title 22, CCR, Section 64426, Significant Rise in Bacterial Count for the month of February 2015 due to the presence of *E.coli* bacteria in a routine sample collected in February 17, 2015.

The Division has also determined that the Water System failed to comply with Title 22, CCR, Section 64426 (b) which requires a public water system to notify the Division, when a violation of Section 64426(a)(1) through (3), that a significant rise in bacterial count has occurred. Notification to the Division is required by the end of the business day on which the violation has been determined. If the Division is closed, notification shall be within 24 hours of the determination.

Based on the submitted data, the Division has also determined that the Water System failed to comply with the California Groundwater Rule which requires the Water System to conduct triggered source monitoring from the well(s) serving the system in response to a coliform positive distribution sample within 24 hours of being notified of the coliform positive result. The Water System collected raw water samples from Wells 1A, 1B, 2 and 3 on February 23, 2015.

DIRECTIVES

The Bluebell Valley Mutual Water Company and its owner of record are hereby directed to take the following actions:

1. Comply with Title 22, CCR, Section 64426, in all future monitoring periods.

2. By **April 30, 2015**, the Water System shall provide to the Division certification of public notification using the enclosed Proof of Notification form (Attachment F). A copy of the final notice that was distributed is included as Attachment D.

3. By **April 30, 2015**, the Water System shall submit an amended Bacteriological Sample Siting Plan which identifies locations and descriptions of routine sample sites and corresponding repeat sample sites.

4. The Water System shall notify the Division of any violations of the total coliform MCL by the end of the business day on which the violation has been determined, or, if the Division is closed, within 24 hours of the determination.

5. In accordance with the California Ground Water Rule, the Water System shall conduct triggered source monitoring in response to a coliform positive distribution sample within 24 hours of being notified of the coliform positive result.

6. By **May 30, 2015,** the Water System shall prepare a report documenting a cross-connection survey of the water distribution system by a certified specialist to identify locations where cross-connections are likely to occur and which makes recommendations of backflow protection needs. This report shall be submitted to the Division for review and approval. All necessary backflow prevention devices recommended shall be installed and tested within 60 days of the Division approving the report.

7. The Water System shall conduct additional bacteriological tests on the raw water produced from Well 1B once a week during the months of April, May and June. All of these raw water samples shall be analyzed for total and fecal coliform using the Multiple Tube Fermentation Method to determine the density of the coliform. The results of these samples shall be reported to the Division by the 10th day of the following month.

8. The Water System shall prepare an Emergency Chlorination Plan and submit to the Division for review and approval by **April 30, 2015**.

9. The Water System shall conduct a well cycle test of Well 1B following a significant rain event. A copy of the protocol for conducting a Bacteriological Well Cycle Test is attached. All monitoring results must be submitted to the Division for review by the 10th day of the month following completion of the analyses.

9. All submittals required by this Citation shall be addressed to:

Kassy D. Chauhan, Senior Sanitary Engineer
State Water Resources Control Board
Division of Drinking Water, Visalia District
265 W. Bullard Ave, Suite 101
Fresno, CA 93704

As used in this Citation, the date of issuance shall be the date of this Citation; and the date of service shall be the date of service of this Citation, personal or by certified mail, on the Water System.

The Division reserves the right to make such modifications to the Citation as it may deem necessary and/or to issue such further citation(s) as it may deem necessary to protect public

health and safety. Such modifications may be issued as amendments to this Citation and shall be effective upon issuance.

Nothing in this Citation relieves Water System or its owner of record of its obligation to meet the requirements of the California SDWA, or any regulation, standard, permit or order issued thereunder.

PARTIES BOUND

This Citation shall apply to and be binding upon Bluebell Valley Mutual Water Company, its owners, shareholders, officers, directors, agents, employees, contractors, successors, and assignees.

SEVERABILITY

The Directives of this Citation are severable, and Bluebell Valley Mutual Water Company and its owner of record shall comply with each and every provision hereof, notwithstanding the effectiveness of any other provision.

FURTHER ENFORCEMENT ACTION

The California SDWA authorizes the Board to: issue a citation with assessment of administrative penalties to a public water system for violation or continued violation of the requirements of the California SDWA or any regulation, permit, standard, citation, or order issued or adopted thereunder including, but not limited to, failure to correct a violation identified in a citation or compliance order. The California SDWA also authorizes the Board to take action to suspend or revoke a permit that has been issued to a public water system if the public water system has violated applicable law or regulations or has failed to comply with an order of the Board; and to petition the superior court to take various enforcement

measures against a public water system that has failed to comply with an order of the Board. The Board does not waive any further enforcement action by issuance of this Order.

4-14-15
Date

Kassy D. Chauhan
Kassy D. Chauhan, P.E.
Senior Sanitary Engineer, Merced District
DRINKING WATER FIELD OPERATIONS BRANCH

Certified Mail No. 7010 3090 0002 0396 4123

Cc: Tuolumne County Environmental Health Department
Mr. John Turner, Contract Operator, 18803 Middle Camp Road Twain Harte CA 95383

KDC/mlm

Attachments:
Attachment A: Applicable Authorities
Attachment B: Detailed Description of Events
Attachment C: Summary of Distribution Bacteriological Samples from February to March 2015
Attachment D: Public Notice for February 2015
Attachment E: Completed Investigation Form
Attachment F: Proof of Notification Form
Attachment G: Well Cycle Test

Attachment A

Applicable Statues and Regulations for Citation No. 03-11-15C-004

Section 116650 of the CHSC states in relevant part:

§116650. Citations

(a) If the Division determines that a public water system is in violation of this chapter or any regulation, permit, standard, citation, or order issued or adopted thereunder, the Division may issue a citation to the public water system. The citation shall be served upon the public water system personally or by certified mail. Service shall be deemed effective as of the date of personal service or the date of receipt of the certified mail. If a person to whom a citation is directed refuses to accept delivery of the certified mail, the date of service shall be deemed to be the date of mailing.

(b) Each citation shall be in writing and shall describe the nature of the violation or violations, including a reference to the statutory provision, standard, order, citation, permit, or regulation alleged to have been violated.

(c) A citation may specify a date for elimination or correction of the condition constituting the violation.

(d) A citation may include the assessment of a penalty as specified in subdivision (e).

(e) The Division may assess a penalty in an amount not to exceed one thousand dollars ($1,000) per day for each day that a violation occurred, and for each day that a violation continues to occur. A separate penalty may be assessed for each violation.

§64426. Significant Rise in Bacterial Count of Title 22, California Code of Regulations (CCR) states in relevant part:

(a) Any of the following criteria shall indicate a possible significant rise in bacterial count:
(1) A system collecting at least 40 samples per month has a total coliform-positive routine sample followed by two total coliform-positive repeat samples in the repeat sample set;

(2) A system has a sample which is positive for fecal coliform or E. coli; or
(3) A system fails the total coliform Maximum Contaminant Level (MCL) as defined in §64426.1.

(b) When the coliform levels specified in subsection (a) are reached or exceeded, the water supplier shall:
(1) Contact the Department by the end of the day on which the system is notified of the test result or the system determines that it has exceeded the MCL, unless the notification or determination occurs after the Department office is closed, in which case the supplier shall notify the Department within 24 hours; and
(2) Submit to the Department information on the current status of physical works and operating procedures which may have caused the elevated bacteriological findings, or any information on community illness suspected of being waterborne. This shall include, but not be limited to:

(A) Current operating procedures that are or could potentially be related to the increase in bacterial count;
(B) Any interruptions in the treatment process;
(C) System pressure loss to less than 5 psi;
(D) Vandalism and/or unauthorized access to facilities;
(E) Physical evidence indicating bacteriological contamination of facilities;
(F) Analytical results of any additional samples collected, including source samples;
(G) Community illness suspected of being waterborne; and
(H) Records of the investigation and any action taken.
(c) Upon receiving notification from the Department of a significant rise in bacterial count, the water supplier shall implement the emergency notification plan required by Section 116460, Health and Safety Code.

Section 64426.1 of Title 22, California Code of Regulations (CCR) states in relevant part:
§64426.1. Total Coliform Maximum Contaminant Level (MCL).

(a) Results of all samples collected in a calendar month pursuant to Sections 64423, 64424, and 64425 that are not invalidated by the Department or the laboratory shall be included in determining compliance with the total coliform MCL. Special purpose samples such as those listed in §64421(b) and samples collected by the water supplier during special investigations shall not be used to determine compliance with the total coliform MCL.

(b) A public water system is in violation of the total coliform MCL when any of the following occurs:
   (1) For a public water system which collects at least 40 samples per month, more than 5.0 percent of the samples collected during any month are total coliform-positive; or
   (2) For a public water system which collects fewer than 40 samples per month, more than one sample collected during any month is total coliform-positive; or
   (3) Any repeat sample is fecal coliform-positive or E. coli-positive; or
   (4) Any repeat sample following a fecal coliform-positive or E. coli-positive routine sample is total coliform-positive.

(c) If a public water system is not in compliance with paragraphs (b)(1) through (4), during any month in which it supplies water to the public, the water supplier shall notify the Department by the end of the business day on which this is determined, unless the determination occurs after the Department office is closed, in which case the supplier shall notify the Department within 24 hours of the determination. The water supplier shall also notify the consumers served by the water system. A Tier 2 Public Notice shall be given for violations of paragraphs (b)(1) or (2), pursuant to section 64463.4. A Tier 1 Public Notice shall be given for violations of paragraphs (b)(3) or (4), pursuant to section 64463.1.

Section 64463.4 of Title 22, California Code of Regulations (CCR) states in relevant part:
§64463.4. Tier 2 Public Notice.

(a) A water system shall give public notice pursuant to this section if any of the following occurs:
   (1) Any violation of the MCL, MRDL, and treatment technique requirements, except:
      (A) Where a Tier 1 public notice is required under section 64463.1; or
      (B) Where the Department determines that a Tier 1 public notice is required, based on potential health impacts and persistence of the violations;

(2) All violations of the monitoring and testing procedure requirements in sections 64421 through 64426.1, article 3 (Primary Standards – Bacteriological Quality), for which the Department determines that a Tier 2 rather than a Tier 3 public notice is required, based on potential health impacts and persistence of the violations;

. . . .

(b) A water system shall give the notice as soon as possible within 30 days after it learns of a violation or occurrence specified in subsection (a), except that the water system may request an extension of up to 60 days for providing the notice. This extension would be subject to the Department's written approval based on the violation or occurrence having been resolved and the Department's determination that public health and welfare would in no way be adversely affected. In addition, the water system shall:

(1) Maintain posted notices in place for as long as the violation or occurrence continues, but in no case less than seven days;

(2) Repeat the notice every three months as long as the violation or occurrence continues. Subject to the Department's written approval based on its determination that public health would in no way be adversely affected, the water system may be allowed to notice less frequently but in no case less than once per year. No allowance for reduced frequency of notice shall be given in the case of a total coliform MCL violation or violation of a Chapter 17 treatment technique requirement; and

. . . . .

(c) A water system shall deliver the notice, in a manner designed to reach persons served, within the required time period as follows:

(1) Unless otherwise directed by the Department in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, community water systems shall give public notice by;

(A) Mail or direct delivery to each customer receiving a bill including those that provide their drinking water to others (e.g., schools or school systems, apartment building owners, or large private employers), and other service connections to which water is delivered by the water system; and

(B) Use of one or more of the following methods to reach persons not likely to be reached by a mailing or direct delivery (renters, university students, nursing home patients, prison inmates, etc.):

1. Publication in a local newspaper;
2. Posting in conspicuous public places served by the water system, or on the Internet; or
3. Delivery to community organizations.

(2) Unless otherwise directed by the Department in writing based on its assessment of the violation or occurrence and the potential for adverse effects on public health and welfare, noncommunity water systems shall give the public notice by:

(A) Posting in conspicuous locations throughout the area served by the water system; and

(B) Using one or more of the following methods to reach persons not likely to be reached by a public posting:

1. Publication in a local newspaper or newsletter distributed to customers;
2. E-mail message to employees or students;
3. Posting on the Internet or intranet; or
4. Direct delivery to each customer.

Section 64465. of Title 22, California Code of Regulations (CCR) states in relevant part:
§64465. Public Notice Content and Format.

(a) Each public notice given pursuant to this article, except Tier 3 public notices for variances and exemptions pursuant to subsection (b), shall contain the following:
  (1) A description of the violation or occurrence, including the contaminant(s) of concern, and (as applicable) the contaminant level(s);
  (2) The date(s) of the violation or occurrence;
  (3) Any potential adverse health effects from the violation or occurrence, including the appropriate standard health effects language from appendices 64465-A through G;
  (4) The population at risk, including subpopulations particularly vulnerable if exposed to the contaminant in drinking water;
  (5) Whether alternative water supplies should be used;
  (6) What actions consumers should take, including when they should seek medical help, if known;
  (7) What the water system is doing to correct the violation or occurrence;
  (8) When the water system expects to return to compliance or resolve the occurrence;
  (9) The name, business address, and phone number of the water system owner, operator, or designee of the water system as a source of additional information concerning the public notice;
  (10) A statement to encourage the public notice recipient to distribute the public notice to other persons served, using the following standard language: "Please share this information with all the other people who drink this water, especially those who may not have received this public notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail"; and
  (11) For a water system with a monitoring and testing procedure violation, this language shall be included: "We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During [*compliance period dates*], we *['did not monitor or test'* or *'did not complete all monitoring or testing']* for *[contaminant(s)]*, and therefore, cannot be sure of the quality of your drinking water during that time."

. . . . .

(c) Each public notice given pursuant to this article shall contain information in Spanish regarding the importance of the notice, or contain a telephone number or address where Spanish-speaking residents may contact the water system to obtain a translated copy of the public notice or assistance in Spanish. For each non-English speaking group other than Spanish-speaking that exceeds 1,000 residents or 10% of the residents in the community served, whichever is less, the public notice shall:
  (1) Contain information in the appropriate language(s) regarding the importance of the notice, or
  (2) Contain a telephone number or address where such residents may contact the water system to obtain a translated copy of the notice or assistance in the appropriate language.

(d) Each public notice given pursuant to this article shall:

(1) Be displayed such that it catches people's attention when printed or posted and be formatted in such a way that the message in the public notice can be understood at the eighth-grade level;
(2) Not contain technical language beyond an eighth-grade level or print smaller than 12 point; and
(3) Not contain language that minimizes or contradicts the information being given in the public notice.

Ground Water Rule

Section 64430. of Title 22, California Code of Regulations (CCR) states in relevant part:
§64430. Requirements.

A public water system that uses ground water shall comply with the following provisions of 40 Code of Federal Regulations as they appear in the Ground Water Rule published in 71 Federal Register 65574 (November 8, 2006) and amended in 71 Federal Register 67427 (November 21, 2006) and 74 Federal Register 30953 (June 29, 2009), which are hereby incorporated by reference: Sections 141.21(d)(3), 141.28(a), 141.153(h)(6), Appendix A to Subpart O (Consumer Confidence Reports), 141.202(a)(8), 141.203(a)(4), Appendices A and B to Subpart Q (Public Notification), and 141.400 through 141.405, except that in:

(a) sections 141.402(a)(1)(ii), (a)(2), (a)(2)(ii), (a)(4), (a)(4)(ii)(A), (a)(5)(i), and (a)(5)(ii), the phrase —§141.21(a)‖ is replaced by —22 California Code of Regulations sections 64422 and 64423‖,
(b) sections 141.402(a)(1)(ii) and 141.405(b)(4), the phrase —§141.21(c)‖ is replaced by —22 California Code of Regulations section 64425‖, and
(c) section 141.402(a)(2)(iii), the phrase —§141.21(b)‖ is replaced by —22 California Code of Regulations section 64424‖.

[Note: The text reflecting this section is provided in Addendum A of this book.]

Addendum A

§141.402. Ground water source microbial monitoring and analytical methods.

(a) *Triggered source water monitoring* —

(1) *General requirements.* A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (a)(1)(i) and (a)(1)(ii) of this section exist.
(i) The system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and
(ii) The system is notified that a sample collected under 22 California Code of Regulations sections 64422 and 64423 is total coliform-positive and the sample is not invalidated under 22 California Code of Regulations section 64425.

(2) *Sampling requirements.* A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under 22 California Code of Regulations sections 64422 and 64423, except as provided in paragraph (a)(2)(ii) of this section.
(i) The State may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the State must specify how much time the system has to collect the sample.
(ii) If approved by the State, systems with more than one ground water source may meet the requirements of this paragraph (a)(2) by sampling a representative

ground water source or sources. If directed by the State, systems must submit for State approval a triggered source water monitoring plan that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under 22 California Code of Regulations sections 64422 and 64423 and that the system intends to use for representative sampling under this paragraph.

(iii) A ground water system serving 1,000 people or fewer may use a repeat sample collected from a ground water source to meet both the requirements of 22 California Code of Regulations section 64424 and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a). If the repeat sample collected from the ground water source is *E.coli* positive, the system must comply with paragraph (a)(3) of this section.

(3) *Additional requirements.* If the State does not require corrective action under §141.403(a)(2) for a fecal indicator-positive source water sample collected under paragraph (a)(2) of this section that is not invalidated under paragraph (d) of this section, the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.

(4) *Consecutive and wholesale systems —*

(i) In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample collected under 22 California Code of Regulations sections 64422 and 64423 must notify the wholesale system(s) within 24 hours of being notified of the total coliform-positive sample.

(ii) In addition to the other requirements of this paragraph (a), a wholesale ground water system must comply with paragraphs (a)(4)(ii)(A) and (a)(4)(ii)(B) of this section.

(A) A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under 22 California Code of Regulations sections 64422 and 64423 is total coliform-positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under paragraph (a)(2) of this section and analyze it for a fecal indicator under paragraph (c) of this section.

(B) If the sample collected under paragraph (a)(4)(ii)(A) of this section is fecal indicator-positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator source water positive within 24 hours of being notified of the ground water source sample monitoring result and must meet the requirements of paragraph (a)(3) of this section.

(5) *Exceptions to the triggered source water monitoring requirements.* A ground water system is not required to comply with the source water monitoring requirements of paragraph (a) of this section if either of the following conditions exists:

(i) The State determines, and documents in writing, that the total coliform-positive sample collected under 22 California Code of Regulations sections 64422 and 64423 is caused by a distribution system deficiency; or

(ii) The total coliform-positive sample collected under 22 California Code of Regulations sections 64422 and 64423 is collected at a location that meets State criteria for distribution system conditions that will cause total coliform-positive samples.

Blue Bell Valley Mutual Water Company
5500040
P.O. Box 56
Standard, California 95373
209 533-7954

E Coli Incident Time Line Draft

2/5/2015 Received Chromium, Hexavalent results sample taken Dec 8, 2014 Well 1A, 1B, Well 2, Well 3, Well 4

2/17/2015 Nitrate tests well 1B and well 3 Primary site Bacti test 18036 Blue Bell East

2/18/2015 Call from Aqualab - Cathy indicates hot test – need to retest – waiting to find out what we are up against –
2/18/2015 5:30PM Chlorinated (Sodium Hypochlorite 12.5%) to .5 mg/l at tanks (tanks fill at night)

2/19/2015 10:00AM added Chlorine at Tanks .5 mg/l

2/20/2015 Still waiting on test results from Aqualab repeat Bacti sample at primary site, additional tests at upstream 17994 Blue Bell East and down stream site 15191 Lupine Lane

2/20/2015 Repeat Test
1st repeat.pdf (943 KB)
Primary site 18036 Blue Bell East 09:56 AM

2/21/2015 Chlorinated Tanks – unable to reach Cathy Aqualab to confirm tests upstream and down stream of primary Bacti test site

2/22/2015 Chlorinated Tanks maintain .5mg/l

2/23/2015 received email 8:33 AM Aqualab received results:
original failure.pdf (487 KB): primary site 18036 BBE test results received
E coli confirmed 1.1
Fecal Coliform 2.6

2nd repeat.pdf (1 MB)
Primary site 18036 Blue Bell East 09:56 AM
Upstream 18036B Blue Bell East 10:01 AM
Upstream 17994 Blue Bell E 09:52 AM
Down Stream 15191 Lupine Lane 10:14 AM

2/23/2015 Source Wells tested

Well 1A 09:29 AM
Well 1B 09:32 AM
Well 2 09:37 AM
Well 3 09:45 AM

2/23/2015 received call from SWRB Christopher:

Issued Boil Order Mandate

2/23/2015 Karen organized with Jan Yancey, Diana Mc Bride, Dave and Suzanne Bartels delivered Boil Order Notices. Tim Holden called Bud Baker that the primary sample taken from their residence was positive. Tim Holden phoned all board members brought up to speed about state of problem as known at this moment.

2/24/2015 2/25/2015 Karen had conversation about cross connections with Christopher Barber documented via email Christopher Sent documentation about cross connection State codes

2/24/2015 Phone call to Atcaa School followed by Boil Order – concerns and questions answered via phone – School closed for a couple of days.

2/24/2015 Karen and Christopher worked together on Boil Order Notice Christopher forwarded State Codes

2/24/2015 Forwarded received test results from 2/17/2015 at 8:34 AM to SWRB Christopher and Board of Directors BBVMWC

Original Failure.pdf

Primary test site 18036 BBE Total <1.1

E coli 1.1
Fecal 1.1
Total Coliform 1.1

1st repeat.pdf

Results pending post chlorination

2nd repeat.pdf

Results pending post chlorination

2/25/2015 Received results Bacti tests on 2/23/2015

2/25/2015 Tim reviewing results, noted two apparent issues: (email to SWRB)

1. 17994 Blue Bell East is the home with the horse trough.
    1. Spoke with homeowner about horse trough and aerator
2. Well 1B
    1. flushed and chlorinated dosage .5mg/l

2/25/2015 Bacti results received from 2/23/2015 test samples

Well 1A 0 Prsmp Total <1.1

Well 1B Confirmed source contaminated
E coli 1.1
Fecal 1.1
Total Coliform 4.6
Well 1B off line sense 2/16/2015 normal monthly usage cycle
Well 3 0 Prsmp Total <1.1
Well 2 0 Prsmp Total <1.1

2/25/2015 Forwarded test results from 2/23/2015 at 5:09 PM to SWRB Christopher
Blue bell225.pdf Routine and Upstream and Down Stream test results
Primary test site 18036 BBE Total <1.1
Upstream 18036B BBE
E coli 1.1
Fecal 1.1
Total Coliform 1.1
Upstream 17994 BBE
E coli 4.6
Fecal 4.6
Total Coliform 4.6
Down Stream 15191 LL
E coli 1.1
Fecal 1.1
Total Coliform 1.1

2/25/2015 Per our phone conversation today, please perform the disinfection of the distribution system as follows:

- Using NSF 60-certified sodium hypochlorite, bring the chlorine residual in the tank to 2.0-2.5 mg/L leaving the tank(s).
- Flush the distribution system until a chlorine residual of 0.5mg/L is detected at the furthest point in the distribution system.
- Do Not Add Additional Chlorine at This Point
- Wait at least 24 hour before flushing the disinfectant from the distribution system.

If you have any further questions, please contact me.
Christopher Barber

2/25/2015 Completed Positive Total Coliform documentation

2/26/2015 Good morning Christopher,

This morning Feb. 26 from 8:15AM to 10:00 AM Don Perkins Operator from TUD met with me at Blue Bell and reviewed and discussed the current E coli problem. Following the guidelines Kassy proposed for chlorination dosage and residuals. Don reviewed my numbers for dosage, residuals, tank and well stats, etc. He made a brief inspection of system.

Don's recommendations are:

1. To recheck each well head for static and draw down and compare to last readings a couple of months ago.
2. Remove front tank from service temporally use single tank for more consistent chlorination mixture.
3. Continue the flushing and chlorination.

2/26/2015 Nitrate report fro well 1B &3 received from Aqualab at 3:41 PM forwarded to SWRB and to BBVMWC Board of Directors
Bluebellno3.pdf

2/26/2015 Christopher sent a list of items via email to comply with.

2/27/2015 New BSSP due 3/15/2015

2/27/2015 11:30 AM clarification email chlorine residual at ends of system

2/28/2015 Nitrate test results received from samples taken 2/17/2015
Well 1B MCL 45 Analyses results 20.4
Well 3 MCL 45 Analyses results 48.7 – exceeds

2/28/2015 Letter to flush Exterior Faucets, Sprinklers, Drip systems sent to homeowners.

3/1/2015 Flush lines to draw chlorine from tanks at BBE Hydrant 1500 gallons
Flushed to Hydrant at Well 2 to draw chlorine from tanks 1500 gallons

3/2/2015 email Aqualab Mon 2/23/2015 1:12 PM

3/2/2015 Water Board Meeting

3/3/2015 BSSP Mapping in progress

3/4/2015 11:39 AM clarification email to SWRB Christopher Well 3 flushed and Nitrate level re-sampled

3/5/2015 Thanks a big map would be very helpful. My conversation with Christopher yesterday included the following.

1. Well number is out of service and valve is closed off.
2. I had made sure well 3 is off line once I received test results.
3. I spoke with AquaLab about the high Nitrate reading and asked for another test.
4. Well 3 has been flushed again outside of the water system.
5. New Nitrate test was taken on Monday 2, 2015
6. Christopher verbally issued a No Drink order for well 3.
7. I will send Christopher and update system map with new bacteria sample site plan (BSSP)
8. Also send an update system information

9. Well 1B is closed out of system
10. I assured Christopher I have full faith in Richard's ability in my absence.
11. Send Christopher well run logs.
12. I failed to notify CDPH about the high Nitrate, Oops!

One last thing to do: Post a sign on well 3 unsafe to drink until further notice.

Tim

3/7/2015 Well 4 Flush to field – 1596 gallons

3/7/2015 Well 3 flush to field
begin 10247.20 cu ft.
end 10249.60 cu ft. – 1795 gallons

3/7/2015 Chlorinated tanks – 1:10 PM
Dosage at tanks 2.5

3/7/2015 Flushed Well 1B to field 3000 gallons

3/7/2015 BSSP Map up dated

3/8/2015 Richard and Tim Spoke to property owner at Well 3 site and neighbor about why Well 3 being taken out of service.

3/8/2015 Chlorinated tanks and well 1B – 6:50 PM
Dosage at tanks 2.5
Dosage to Well 1B .5

3/9/2015 As the most recent round of bacteriological monitoring shows no sign of contamination, the Bluebell Valley MWC must conduct a second round of bacteriological monitoring from the distribution system **and** Well No. 1B. Please ensure the second round of bacteriological monitoring samples are taken from the area that came back positive in addition to other areas in the distribution system. The goal is to ensure the entire distribution system is free from contamination. The Boil Water Notice must remain in place until the Division is satisfied with the monitoring results. Christopher Barber

3/9/2015 12:03 PM email from SWRB Christopher Well 3 must be offline and removed from system 'Do Not Drink Order'

Regarding Well No. 3, the second sample taken also exceeded the MCL for nitrate. As a result, Well No. 3 cannot be used as a source of supply in the public water system. Please ensure Well No. 3 cannot be automatically or accidentally turned on to supply water to the distribution system. In addition, please submit a plan for the future of Well No. 3 by March 31, 2015. Christopher Barber

3/10/2015 Test results from 3/2/2015 received

3/12/2015 Received corrected results from AquaLab

3/12/2015 Water sampling

3/16/2015 Water sampling

3/16/2015 Well 3 current being plumbed outside of system for fire flow only posting Do Not Drink

3/18/2015 Ordered chlorination Tank for well 1B

3/20/2015 Water sampling end of system .2ppm SSL & BBW

3/20/2015 email to Christopher attached test results from 3/16/2015

3/23/2015 Water Sampling

3/24/2015 Map corrections BSSP

3/24/2015 Flushed Well 1B to field 4500 gallons

3/25/2015 Additional Correction BSSP site Map

3/25/2015 4 more water samples 4th round

3/27/2015 5:19 PM email Release of Boil Order from SWRB

3/27/2015 Atcaa School notified about release of Boil Order

4/1/2015 Christopher SWRB requires time line of events forwarded to him

4/2/2015 – 4/6/2015 Assembling Time Line

4/6/2015 Forwarded time line Draft to SWRB

Bacteriological Distribution Monitoring Report

5500040 BLUEBELL VALLEY MWC

Distribution System Freq: 1/M

Sample Date	Location	T Coli	E Coli	F Coli	HPC	Type	Cl2	Violation	Comment
2/17/2015	OT @ 18036 Bluebell E.	2.6	1.1	2.6		Routine		MCL	
2/20/2015	Above 17994 Bluebell E	<1.1				Repeat			
2/20/2015	Below 15191 Lupine Ln	<1.1				Repeat			
2/20/2015	OT @ 18036 Bluebell E.	1.1	1.1	1.1		Repeat			
2/23/2015	Above 17994 Bluebell E	4.6	4.6	4.6		Repeat			
2/23/2015	Above 18036 Bluebell E	1.1	1.1	1.1		Repeat			
2/23/2015	Below 15191 Lupin Ln	1.1	1.1	1.1		Repeat			
2/23/2015	OT @ 18036 Bluebell E.	<1.1				Repeat			
2/23/2015	Well 1A	<1.1				Source R			
2/23/2015	Well 1B	4.6	1.1	1.1		Source R			
2/23/2015	Well 2	<1.1				Source R			
2/23/2015	Well 3	<1.1				Source R			
3/2/2015	4 samples: At 18036 Bluebell, Above 18036 Bluebell, Above 17994 Bluebell, Below 15194 Lupin Ln	<1.1				Repeat			
3/2/2015	Wells: 1A, 1B, 3, 2	<1.1				Routine			
3/12/2015	4 samples: At 18036 Bluebell, Above 17994 Bluebell, Above 18036 Bluebell, Below 15191 Lupin Ln	<1.1				Routine			
3/12/2015	Wells: 1A, 1B	<1.1				Source R			
3/25/2015	3 samples: at 18036 Bluebell, 17863 Shooting Star, 15945 Bluebell W	<1.1				Other			
3/25/2015	Well 1B	<1.1				Other			

Violation Key

MCL	Exceeds the maximum contaminant level	MR4	Did not collect 5 routine samples for previous month's positive sample
MR1	No monthly sample for the report month	MR5	Incorrect number of repeat samples as follow-up to a positive sample
MR2	No quarterly sample for the report month	MR6	No source sample
MR3	Incorrect number of routine samples for the report month	MR7	No summary report submitted
		MR8	Other comments and/or info.

Attachment D

Date: February 23, 2015

BOIL WATER NOTICE

BOIL YOUR WATER BEFORE USING

Failure to follow this advisory could result in stomach or intestinal illness.

Due to Escherichia Coli (E. Coli) positive samples from the water system taken on February 17, 2015, the State Water Resource Control Board - Division of Drinking Water, and Blue Bell Valley Mutual Water Company Water are advising residents of the Blue Bell Valley Development who use Blue Bell Valley Mutual Water Company water to use boiled tap water or bottled water for drinking and cooking purposes as a safety precaution.

DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST. Bring all water to a boil, **let it boil for one (1) minute,** and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water. This is the preferred method to assure that the water is safe to drink.

- Water disinfection tablets may also be used by following the manufacturer's instructions.
- Optional: Potable water is available at grocery stores.

We will inform you when tests show that water is safe to drink and you no longer need to boil your water. We anticipate resolving the problem within two (2) weeks.

For more information call:

Water Utility contact: Blue Bell Valley Mutual Water Company Answering Service, (209) 533-7954, (round the clock service), or/and P.O. Box 56, Standard, CA 95373, Tim Holden, President.

State Water Resource Control Board - Division of Drinking Water: (559) 447-3300, Merced District Office

Tuolumne County Environmental Health: Christy McKinnon at (209) 533-5633.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

Attachment E

POSITIVE TOTAL COLIFORM INVESTIGATION

This form is intended to assist public water systems in completing the investigation required by the California Department of Public Health (Section 64426(b) of Title 22, California Code of Regulations) and may be modified to take into account conditions unique to the system.

ADMINISTRATIVE INFORMATION

PWS Name:	Blue Bell Valley Mutual Water Company	**PWSID NUMBER:**	5500040

	Name	**Address**	**Telephone #**
Operator in Responsible Charge (ORC)	Tim Holden	P.O. Box 56 Standard, CA 95373	209 259-9444
Person that collected TC samples if different than ORC	AquaLab technician Monica	18843 Fir Dr. Twain Harte, CA 95383	209 586-3400
Owner	Blue Bell Valley Mutual	P.O. Box 56 Standard, CA 95373	209 533-7954
Certified Laboratory for Microbiological Analyses	AquaLab	18843 Fir Dr. Twain Harte, CA 95383	209 586-3400

Date Investigation Completed:	On going
Month(s) of Total Coliform MCL Failure:	

INVESTIGATION DETAILS

SOURCE	**WELL (name)**	**WELL (name)**	**WELL (name)**	**WELL (name)**	**COMMENTS**
	1A	1B	2	3	
1. Inspect each well head for physical defects and report					
a. Is raw water sample tap upstream from point of disinfection?	Yes	Yes	Yes	Yes	Well fed to tank via distribution system nightly Tank fed to distribution daily
b. Is wellhead vent pipe screened?	Yes	Yes	Yes	Yes	
c. Is wellhead seal watertight?	Yes	Yes	Yes	Yes	
d. Is well head located in pit or is any piping from the wellhead submerged?	No	No	No	No	
e. Does the ground surface slope towards well head?	No	No	No	No	
f. Is there evidence of standing water near the wellhead?	No	No	No	No	
g. Are there any connections to the raw water piping that could be cross-connections? (describe all connections in comments)	No	No	No	No	
h. Is the wellhead secured to prevent unauthorized access?	Yes	Yes	Yes	Yes	
i. To what treatment plant (name) does this well pump?	N/A	N/A	N/A	N/A	
j. How often do you take a raw water total coliform (TC) test?	Monthly	Monthly	Monthly	Monthly	
k. Provide the date and result of the last TC test at this location	2/23/15	2/23/15	2/23/15	2/23/15	

TREATMENT	**PLANT (NAME)**	**PLANT (NAME)**	**PLANT (NAME)**	**PLANT (NAME)**	**COMMENTS**
1. If you provide continuous chlorination treatment, was there any equipment failure? Did the distribution system maintain a chlorine residual?					No continuous treatment

POSITIVE TOTAL COLIFORM INVESTIGATION

TREATMENT	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	PLANT (NAME)	COMMENTS
a. Was emergency chlorination initiated?					Yes
b. If yes, for how long?					Daily from tank
2. Did the distribution system lose chlorine residual?					No
3. If you do not provide routine chlorination, was emergency chlorination initiated?					Yes
If Yes, when?					2/18/2015
4. Inspect each point where disinfectant is added and report					
a. For hypochlorinator systems					N/A
1. Is the disinfectant feed pump feeding disinfectant?					N/A
2. What is the feed rate of disinfectant in ml/minute					N/A
3. What is the concentration of the disinfectant solution being fed? (percent, or mg/l of chlorine as HOCl)					12.5%
4. By what method was the concentration of solution determined? (ex: measured, manufacturer's literature)					manufacturer's literature to volume of storage on hand
5. What is the age (days) of the disinfectant solution currently being used at this treatment location?					< 10 days
6. What is the raw water flow rate at the point where disinfectant is added in gallons per minute?					Variable to 200gpm
7. What is the **total** chlorine residual measured immediately downstream from the point of application?					.5 ppm 2/24/15
8. What is the **free** chlorine residual measured immediately downstream from the point of application?					< .2 ppm 2/24/15
9. What is the contact time in minutes from the point of disinfectant application to the first customer?					< 3 minutes

STORAGE	TANK (name)	TANK (name)	TANK (name)	TANK (name)	COMMENTS
	Front	Rear			
1. Is each tank locked to prevent unauthorized access?	Yes	Yes			
2. Are all vents of each tank screened down-turned to prevent dust and dirt from entering the tank?	Yes	Yes			
3. Is the overflow on each tank screened?	Yes	Yes			
4. Are there any unsealed openings in the tank such as access doors, water level indicators hatches, etc.?	No	No			
5. Is the roof/cover of the tank sealed and free of any leaks?	Yes	Yes			
6. Is the tank above ground or buried.	Above	Above			
a. If buried or partially buried, are there provisions to direct surface water away from the site.					Not applicable
b. Has the interior of the tank been inspected to identify any sanitary defects, such	No	No			

POSITIVE TOTAL COLIFORM INVESTIGATION

STORAGE	TANK (name) Front	TANK (name) Rear	TANK (name)	TANK (name)	COMMENTS
as root intrusion?					
8. Does the tank "float" on the distribution system or are there separate inlet and outlet lines?	Float	single			
9. What is the **measured** chlorine residual (total/free) of the water exiting the storage tank **today**?					2/25/15 2.5 ppm
10. What is the volume of the storage tank in gallons?	50,000	100,000			
11. Is the tank baffled?	No	No			
12. Prior to the TC+ or EC+, what was the previous date item #1-7 were checked and documented?					Monthly

DISTRIBUTION SYSTEM	SYSTEM RESPONSES
1. What is the minimum pressure you are maintaining in the distribution system?	**35lb**
2. Did pressure in the distribution system drop to less than 5 psi prior to experiencing the TCR positive finding.	**No**
3. Has the distribution system been worked on within the last week? (service taps, hydrant flushing, main breaks, main extensions, etc.) If yes, provide details.	**No**
4. Are there any signs of excavations near your distribution system not under the direct control of your maintenance staff?	**No**
5. Did you inspect your distribution system to check for mainline leaks? Do you or did you have a mainline leak?	**No Leaks**
6. If there was a mainline leak, when was it repaired?	**N/A**
7. On what date was the distribution system last flushed?	**12/10/14 latest 2/24/15**
8. Is there a written flushing procedure you can provide for our review?	**No**
9 Do you have an active cross connection control program?	**Yes**
10. What is name and phone number of your Cross-Connection Control Program Coordinator?	**Pending**
11. Is the review and testing of backflow prevention devices current?	**New devices**
12. On what date was the last physical survey of the system done to identify cross-connections?	**9/14**

BOOSTER STATION	SYSTEM RESPONSES
1. Do you have a booster pump? How many?	**Yes, 3**
2. Do you have a standby booster pump if the main pump fails?	**Yes**
3. Prior to bacteriological quality problems, did your booster pump fail?	**No**
4. Do you notice standing water, leakage at the booster station?	**No**

POSITIVE TOTAL COLIFORM INVESTIGATION

SAMPLE SITE EVALUATION (Complete for all TC+ or EC+ findings)	Routine Site TC+ or EC+	Upstream Site	Downstream Site	Sample 4 (specify)
1. What is the height of the sample tap above grade? (inches)	24 +/-	18 +/-	16 +/-	
2. Is the sample tap located in an **ext**erior location or is it protected by an **enc**losure?	No	No	No	
3. Is the sample tap threaded, have a swing arm (kitchen sink) or aerator (sinks)?	Exterior faucet	Exterior faucet	Exterior faucet	
4. Is the sample tap in good condition, free of leaks around the stem or packing?	Yes	Yes	Yes	
5. Can the sample tap be adjusted to the point where a good laminar flow can be achieved without excessive splash?	Yes	Yes	Yes	
6. Is the sample tap and area around the sample tap clean and dry (free of animal droppings. other contaminants or spray irrigation systems)	Yes	Yes	Yes	
7 Is the area around the sample tap free of excessive vegetation or other impediments to sample collection	Yes	Yes	Yes	
8. Describe how the tap was treated in preparation for sample collection (ran water, swabbed with disinfectant, flamed, etc.)	Ran water 20 up to minutes	Ran water 20 up to minutes	Ran water 20 up to minutes	
9. Is this sample tap designated on the sampling plan submitted with this information request?	Yes	Yes	Yes	
10. What were the weather conditions at the time of the positive sample (rainy, windy, sunny),	@ 60' sunny	@ 60' sunny	@ 60' sunny	

GENERAL OPERATIONS:	Response
1. Where there any power outages that affected water system facilities during the 30 days prior to the TC+ or EC + findings?	Yes
2. Where there any main breaks, water outages, or low pressure reported in the service area where TC+ or EC+ samples were located.	No
3. Does the system have backup power or elevated storage?	Hill Top storage
4. During or soon after bacteriological quality problems, did you receive any complaints of any customers' illness suspected of being waterborne? How many?	2 unverified
5. What were the symptoms of illness if you received complaints about customers being sick?	To be determined

POSITIVE TOTAL COLIFORM INVESTIGATION

ADDITIONAL INFORMATION TO BE SUBMITTED WITH RESPONSES TO THE ABOVE QUESTIONS

1. **Sketch** of System showing all sources, treatment locations, storage tanks, microbiological sampling sites and general layout of the distribution system including the location of all hazardous connections such as the wastewater treatment facility.
2. A set of photographs of the well, pressure tanks, and storage tanks in the system may be submitted if they would show that the contamination is directly related and changes have been made since the last inspection by our Department
3. Name, certification level and certificate number of the Operator in Responsible Charge.
4. Copy of the last cross connection survey performed that identifies the location of all unprotected cross connections.

SUMMARY: BASED ON THE RESULTS OF YOUR INVESTIGATION AND ANY OTHER INFORMATION AT YOUR DISPOSAL, WHAT DO YOU BELIEVE TO BE THE CAUSE OF THE POSITIVE TOTAL COLIFORM SAMPLES FROM YOUR PUBLIC WATER SYSTEM?

1. Possible contamination from horse watering trough above exterior faucet. Conversation with owner did not positively reveal this to be a source of contamination located at 17994 BBE. Owner was not present at time of follow up upstream tests. On site inspection was not possible due to dog on site.
Upon further inspection and conversations with the property owner, the hose maintained a four inch separation above the water line and I witnessed an aerator connected at the tap. I aired on the side of caution and replaced the aerator and spoke about the possibility of contamination entering the water system since the test faucet was located approximately 25 feet away. Mr. Morgan explained that he had not used the test faucet since last summer or longer. No substantial proof could be gathered to positively say this was the contamination cause.

2. Prior to the heavy February rains no tests revealed any contamination at this well. Due to the extended drought, the surrounding ground conditions around well 1B showed no signs of receding or fracturing at the surface near or around the well head. No surface conditions provided any evidence of contaminants entering the well site from the surface. Further information provided by the property owner regarding the location of the dwelling's leach field, found the field to be outside of safe minimum distance. The county could not substantiate the owner's statement however the well logs show the septic system to be over 100 feet away. No substantial change or cause can be determined how the contaminants entered the locked well site. Similar test results between the upstream site at 17994 BBE and the well site suggest that well 1B was source of contamination.

CERTIFICATION: I CERTIFY THAT THE INFORMATION SUBMITTED IN RESPONSE TO THE QUESTIONS ABOVE IS ACCURATE TO THE BEST OF MY PROFESSIONAL KNOWLEDGE

NAME: Tim Holden TITLE: President DATE: 2/25/2015

Certification of Completion of Public Notification

This form, when completed and returned to the Division of Drinking Water – Merced District (265 W. Bullard Ave. #101, Fresno, CA 93704 or fax to 559-447-3304), serves as certification that public notification to water users was completed as required by Title 22, California Code of Regulations, Sections 64463-64465.

Public Water System Name: _____

Public Water System No.: _____

Public notification for **significant rise in bacterial count for the month of February 2015** was performed by the following method(s) (check and complete those that apply):

The notice was mailed to users on: _____
A copy of the notice is attached.

The notice was hand delivered to water customers on: _____
A copy of the notice is attached.

The notice was published in the local newspaper on: _____
A copy of the newspaper notice is attached.

The notice was published in conspicuous places on: _____
A copy of the notice is attached.
A list of locations the notice was posted is attached.

The notice was delivered to community organizations on: _____
A copy of the notice is attached.
A list of community organizations the notice was delivered to is attached.

I hereby certify that the above information is factual.

_____
Printed Name

_____
Title

_____
Signature

_____
Date

Disclosure: Be advised that Section 116725 and 116730 of the California Health and Safety Code state that any person who knowingly makes any false statement on any report or document submitted for the purpose of compliance with the attached order may be liable for a civil penalty not to exceed five thousand dollars ($5,000) for separate violation each day that the violation continues. In addition, the violators may be prosecuted in criminal court and, upon conviction, be punished by a fine of not more than $25,000 for each day of violation, or be imprisoned in the county jail not to exceed one year, or by both the fine and imprisonment.

Due to the Division of Drinking Water within 10 days of issuance of notice to customers
System Number: 5500040
Enforcement Action No. 03-11-15C-004

STATE OF CALIFORNIA-HEALTH AND HUMAN SERVICES AGENCY
GRAY DAVIS, Governor

DEPARTMENT OF HEALTH SERVICES
DRINKING WATER FIELD OPERATIONS BRANCH
5545 EAST AIRWAYS BOULEVARD
FRESNO, CALIFORNIA 93727
(559) 297-3883
FAX (559) 297-3873

WATER SUPPLY WELL CYCLE TEST FOR BACTERIOLOGICAL CONTAMINATION

When a water supply well is suspected to be a possible source of bacteriological contamination in a domestic water system the well must be investigated. The cycle test is an effective method of evaluating the potential for the well to produce bacteriologically contaminated water.

The following procedure is considered to be an effective test for evaluation of the well. The well should be inactive for a minimum of ½ hour or longer before the start of the test, to allow the well to return to a static condition. For best results the well should discharge to waste, or if this is not possible, the discharge should be such that the well will run continuously for the 30 minute duration of the test. Have on hand an adequate supply of sample containers and identification tags.

Open the discharge line and turn the pump on.

Collect bacteriological samples at approximately:

No. 1 first water out of discharge
No. 2 at 1 minute
No. 3 at 5 minutes
No. 4 at 15 minutes
No. 5 at 30 minutes

If cycle test procedure is being done in follow-up to a previous coliform-positive sample from the well the above samples should be analyzed by the multiple tube method to allow a determination of the density of coliform present. If a previous well sample has not been found positive the presence/absence test may be utilized. If any of the cycle test samples are positive the well should be disinfected and a followup cycle test performed by the multiple tube method.

BACTERIOLOGICAL LABORATORY TEST PROCEDURES

Benefits and Disadvantages

Presence/Absence test (Uses 10 ml sample)

Benefits:	Fast – results in 24 hours
	Least expensive
Disadvantage:	Does not determine degree of contamination

Multiple Tube Fermentation method: (Uses 100 ml sample divided to ten 10 ml tubes for fermentation)

Benefits:	Determines degree of contamination
Disadvantages:	Requires 48 hrs if negative, up to 72 hours for completion if positive
	More expensive

Membrane Filter (Uses 100 ml sample)

Benefits:	Results in 24 hours
	Relatively inexpensive
Disadvantages:	Can be difficult to filter adequate size of sample
	Colonies of non-coliform bacteria can obscure coliform bacteria thus nullifying results and requiring re-testing.